

We claim:

1 1. A method for detecting a plurality of signals comprising the steps of:
2 measuring a strength of signals being transmitted on a frequency associated with
3 a signal to be detected;
4 determining an integration time period based on the measured strength of
5 signals; and
6 searching for the signal to be detected using a correlator for the determined
7 integration time period.

1 2. The method of claim 1, wherein the integration time period is determined in a manner
2 inverse to the measured strength of signals.

1 3. The method of claim 1, wherein the integration time period is determined using a curve.

1 4. The method of claim 1, wherein the integration time period is determined using a
2 mathematical equation.

1 5. The method of claim 1, wherein the integration time period is maximized if the measured
2 strength of signals is below a threshold value.

1 6. The method of claim 5, wherein the integration time period is minimized if the measured
2 strength of signals is above or equal to a threshold value.

1 7. The method of claim 1, wherein the frequency is an estimated frequency for the signal to
2 be detected.

1 8. The method of claim 7, wherein the estimated frequency is based on a reference point
2 within a sector in which a receiver is located.

1 9. The method of claim 1 comprising the additional step of:
2 receiving a search message indicating the frequency associated with the signal to
3 be detected.

1 10. The method of claim 1, wherein the frequency is a frequency at which the signal to be
2 detected was transmitted.

1 11. The method of claim 1 comprising the additional steps of:
2 measuring a strength of signals being transmitted on a frequency associated with
3 a second signal to be detected;
4 determining a second integration time period based on the measured strength of
5 signals; and
6 searching for the second signal to be detected using a correlator for the
7 determined second integration time period.

1 12. The method of claim 1, wherein the step of determining the integration time periods
2 include the step of:
3 determining a power spectrum density ratio.

1 13. The method of claim 12, wherein a long integration time period is determined if the
2 power spectrum density ratio is small.

1 14. The method of claim 12, wherein a short integration time period is determined if the
2 power spectrum density ratio is large.